THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY

MASSACHUSETTS EMERGENCY MANAGEMENT AGENCY
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FOR IMMEDIATE RELEASE
June 1, 2008

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MASSACHUSETTS ENTERS THE 2008 HURRICANE SEASON
Federal, State & Local Officials Prepare

Framingham, MA – To help increase public awareness of the effects hurricanes can have on the Commonwealth and the Preparedness steps we all must take, over the next fourteen weeks the Massachusetts Emergency Management Agency (MEMA) will be disseminating important information to ensure the continued safety of our citizens and property.

"In recent years, the severity of these storms and their destructive power has been witnessed in other areas of the country," stated MEMA Director Don Boyce. "With another very active hurricane season predicted, the odds continually increase that New England may be due for its next major hurricane."

MEMA will be continually promoting Hurricane Preparedness through weekly News Releases highlighting key issues relative to the New England Hurricane Season. In addition, there will continue to be numerous workshops and exercises for local officials, as well as Hurricane Preparedness information available on the MEMA website at www.mass.gov/mema. Topics will include Massachusetts' Hurricane History, Preparedness Tips for Families, Home Owners, Populations with Unique Needs, Pet Owners, Boaters, Businesses, Inland Residents, as well as information about Sheltering-In-Place and Evacuation.

Although the Hurricane Season in New England is defined as June 1st to November 30th, 75% of the 40 tropical systems that have impacted our region in the past century have struck during the months of August and September. The last severe hurricane to hit Massachusetts was Hurricane Bob in August 1991. Bob, a Category 2 Hurricane, with winds between 91 and 110mph, caused almost $1 billion in damage, at the time. More recently, Hurricanes Edouard (1996) and Bonnie (1998) threatened the Bay State, but veered out into the Atlantic as they traveled up the coast.

In 1999, Hurricane Floyd, although weakened to a tropical storm prior to its arrival in the Commonwealth, demonstrated that these storms are not merely 'coastal events'. Most of that storm's damage was rain and flood related, causing severe damage as far west as the Berkshires.

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In fact, some of our most devastating flooding associated with these storms has occurred in Central and Western Massachusetts – up to 17" of rain fell in association with the 1938 Hurricane and 25" of rain fell over a 5-day period in August 1955 from Tropical Storms Connie & Diane. The City of Westfield received 13.15" in a single day!

Southern New England lies in the unenviable position of receiving all three "Hurricane Threats", depending upon the track and landfall location: 1) Coastal Inundation due to Storm Surge 2) Widespread inland River Flooding and 3) Widespread Wind Damage far inland.

SCHEDULE OF "HURRICANE SEASON" TOPICS

Week of June 1 – Beginning of Hurricane Season
Week of June 8 – New England Hurricanes of Note
Week of June 15 – Family Hurricane Preparedness
Week of June 22 – Preparing Your Home for a Hurricane
Week of June 29 – Evacuation for a Hurricane
Week of July 6 – Sheltering in Place during a Hurricane
Week of July 13 – Cape Cod Emergency Traffic Plan
Week of July 20 – Inland Flooding from a Hurricane
Week of July 27 – Power Outages during a Hurricane
Week of August 3 – Hurricane Challenges for Populations with Unique Needs
Week of August 10 – Protecting Your Pets during a Hurricane
Week of August 17 – Preparing Your Business for a Hurricane
Week of August 24 – Preparing Your Boat for a Hurricane
Week of August 31 – After the Storm

The Massachusetts Emergency Management Agency (MEMA) is the state agency responsible for coordinating federal, state, local, voluntary and private resources during emergencies and disasters in the Commonwealth of Massachusetts. MEMA provides leadership to: develop plans for effective response to all hazards, disasters or threats; train emergency personnel to protect the public; provide information to the citizenry; and assist individuals, families, businesses and communities to mitigate against, prepare for, and respond to and recover from emergencies, both natural and man made. For additional information about MEMA and Hurricanes, go to www.mass.gov/mema.

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NEW ENGLAND HURRICANES OF NOTE

FRAMINGHAM, MA – Although the Hurricane Season in New England is defined as June 1st through November 30th, the vast majority of the 40 tropical systems that have impacted our region over the past century have struck during the months of August and September. Because Massachusetts is such a relatively small state, it is important to realize that these are not just 'coastal events', but, in fact, everyone in the Commonwealth can be severely impacted by a major storm.

"New England is in the unenviable position of receiving all three types of Hurricane Threats," states Massachusetts Emergency Management Agency Director Don Boyce. "Depending upon the storm's track and landfall location, we can experience coastal inundation from storm surge, widespread inland river flooding, and widespread wind damage."

To best prepare ourselves for the future, it is important to revisit the past, and examine a dozen of the most notable New England Hurricanes and their catastrophic impact upon our region.

The Great Colonial Hurricane of 1635
August 25, 1635

This was the first historical record of an intense hurricane striking New England. The highest winds have been estimated at Category 3 or greater, with winds of 115-plus mph. The storm's eye passed between Boston and Plymouth causing at least 46 casualties. A 20-foot tidal surge was reported in Boston, ruining farms throughout the area. Reports from Governor William Bradford describing the drowning of dozens of Native Americans, the toppling of thousands of trees and the flattening of houses suggest that this storm possessed even greater intensity than the storms of 1815 and 1938.

The Great September Gale of 1815
September 23, 1815

This storm was the first major hurricane to impact New England in 180 years. It initiated in the West Indies, growing to a Category 3 with winds of 135 mph. After crossing Long Island, New York, the storm came ashore at Saybrook, Connecticut, funneling an 11-foot storm surge up

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Narragansett Bay. There, it destroyed 500 houses, 35 ships and flooded Providence, Rhode Island. Impacting Central and Coastal Massachusetts, 'The Great Gale' destroyed the bridge over the Neponset River, connecting Dorchester and Milton, Massachusetts. At least 38 deaths have been attributed to this disaster.

The September Gale of 1869
September 8, 1869

A Category 3, this 'September Gale' was first observed in the Bahamas. It ultimately made landfall in Rhode Island just west of Buzzards Bay, dissipating in Northern Maine. This storm was very compact, but intense. It was reported to have been only 60 miles wide, but it caused extensive damage in Rhode Island, Massachusetts and Maine. Fortunately, its arrival coincided with low tide lessening the storm surge and resulting damage.

The Great New England Hurricane of 1938
September 21, 1938

This Category 5, which has also been dubbed "The Long Island Express", was first detected in the Tropical Atlantic. As it slowly moved northward, it suddenly accelerated to a forward motion of 60 to 70 mph, when it was 100 miles east of North Carolina. Without warning, it made landfall as a Category 3, during an astronomically high tide along Long Island, New York and the Connecticut coast. The Blue Hill Observatory, outside of Boston, measured sustained winds of 121 mph, with gusts of 183 mph. Storm surges of 10 to 12 feet inundated portions of the coast from Long Island to Southeastern Massachusetts, most notably in Narragansett Bay and Buzzards Bay. Heavy rains of 3" to 6" produced severe flooding, particularly in areas of Western Massachusetts and along the Connecticut River. Downtown Providence, Rhode Island was impacted by a 20-foot storm surge. Sections of the Towns of Falmouth and Truro on Cape Cod were under 8 feet of water. The widespread destruction resulting from this storm included 600 deaths and 1,700 injuries. Over $400 million in damage occurred, including 9,000 homes and businesses lost and 15,000 damaged. Damage to the Southern New England fishing fleet was catastrophic, as over 6,000 vessels were either destroyed or severely damaged.

The Great Atlantic Hurricane of 1944
September 14-15, 1944

Sometimes compared to the Great Hurricane of 1938, this storm was first detected northeast of the Lesser Antilles. From there, it hugged the United States coast, crossing Long Island, New York, the Rhode Island Coast, emerged into Massachusetts Bay and impacted Maine. With 140 mph winds, this Category 4, produced hurricane force winds over a diameter of 600 miles causing over $100 million damage. 70-foot high waves were also reported. Up to 11" of rain fell in areas of New England. 390 deaths, mostly at sea, were attributed to this hurricane. It wreaked havoc on World War II shipping, sinking a U.S. Navy destroyer and minesweeper, as well as two U.S. Coast Guard cutters.

Hurricane Dog
September 11-12, 1950

A strong Category 5, Hurricane Dog reached a peak intensity of 185 mph. First observed east of the Lesser Antilles on August 30th, this was a major hurricane that never actually made landfall, passing within 200 miles of Cape Cod. However, it was responsible for the deaths of at least a

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dozen fishermen off the New England coast. It also caused about $3 million damage. To this day, it retains the record for the longest continuous duration for a Category 5 Atlantic Hurricane of 60 hours, from September 5th through September 8th. 'Dog" also fluctuated between Category 4 & 5 strength on four different occasions, which is also a record.

Hurricane Carol
August 31, 1954

This compact, but powerful Category 3 battered New England, killing 68. With 100 mph winds, gusting up to 135mph, 'Carol' caused over $461 million in damage, destroying 4,000 homes, 3,500 cars, and over 3,000 boats. This was arguably the most destructive storm to hit Southern New England since 1938. It formed as a tropical storm near the Bahamas, making brief landfall along the Outer Banks of North Carolina. The storm passed over Long Island, New York, through Central New England into Canada, bringing a storm surge of 14.4 feet to Narragansett Bay and New Bedford Harbor. Over 6" of rain fell. Water depths reached 12 feet in downtown Providence, Rhode Island. Some consider 'Carol' the worst storm in the history of Cape Cod. All of Rhode Island, much of Eastern Connecticut, and much of Eastern Massachusetts lost power, with a 95% loss of telephone service. The name 'Carol' has been retired.

Hurricane Edna
September 11, 1954

'Edna' arrived right on the heels of Hurricane Carol. It formed off of Barbados, reaching Category 3 strength at the Outer Banks of North Carolina, with its highest winds of 120 mph. Before striking New England, its eye split into two different ones, up to 60 miles apart at times, moving over Cape Cod & the Islands where peak gusts were recorded at 120 mph. Its eastern track, which resulted in heavy rain and major inland flooding, adding 5" to 7" of rain to Carol's previous 6". The storm was responsible for 29 deaths and $40 million damage. Ultimately, it made landfall near Eastport, Maine, becoming one of Maine's worst-ever hurricanes. The name 'Edna' has been retired.

Hurricane Diane
August 17-19, 1955

Born in the tropical Atlantic, this storm reached Category 3 status, as it followed the path of Hurricane Connie of 5 days earlier. Maximum winds were recorded at 120 mph. Although it weakened to a Tropical Storm as it reached the Southern New England coast, 'Diane' dropped heavy rain of 10" to 20", setting flood records throughout the region. The storm was blamed for between 185 and 200 deaths. The $832 million damage qualified it as the most costly hurricane in U.S. history until Hurricane Betsy in 1965. The name 'Diana' has been retired.

Hurricane Donna
September 12, 1960

Hurricane Donna was a Category 5 Cape Verde-type hurricane that impacted most of the Caribbean Islands and every single state on the U.S. Eastern seaboard. It recorded 160 mph winds with gusts up to 200 mph. 'Donna' holds the record for retaining 'major hurricane' status of Category 3 or better in the Atlantic basin for the longest period of time. From September 2nd to September 11th it sustained winds of 115 mph as it roamed the Atlantic for 17 days. This storm is the only one on record to produce hurricane-force winds in Florida, the Mid-Atlantic

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States and New England. 'Donna' hit New England in Southeast Connecticut with sustained winds of 100 mph, gusting to 125-130 mph, cutting diagonally through the region to Maine. It produced pockets of 4" to 8" of rain as well as 5 to 10-foot storm surges. The storm ultimately killed 364, and caused over $500 million in damage. The name 'Donna' has been retired.

Hurricane Gloria
September 27, 1985

Hurricane Gloria was a powerful Category 4 Cape Verde-type storm that prowled the Atlantic for 13 days, with highest winds of 145 mph. Hugging the coastline, as it made its way north, 'Gloria' crossed Long Island, New York, making landfall at Milford, Connecticut. In spite of arriving during low tide, it did cause severe beach erosion along the New England coast, as well as the loss of many piers and coastal roads. There was a moderate storm surge of 6.8 feet in New Bedford, Massachusetts. The storm left over 2,000,000 people without power. It dropped up to 6" of rain in Massachusetts, causing many flooding issues in the region. Overall, casualties were relatively low with 8 deaths, but damage reached $900 million. The name 'Gloria' has been retired.

Hurricane Bob
August 19, 1991

Formed east of the Bahamas, Hurricane Bob made landfall in New England near New Bedford, Massachusetts with 115 mph winds, cutting a path across Southeastern Massachusetts towards the Gulf of Maine. Peak winds of 125 mph were recorded in the Towns of Brewster and Truro on Cape Cod. Over 60% of the residents of Southeastern Massachusetts and Southeastern Rhode Island lost power. There were 4 different reports of tornados as 'Bob' came ashore. Buzzards Bay saw a 10 to 15-foot storm surge. A number of south-facing beaches on the islands of Nantucket and Martha's Vineyard lost 50 feet of beach to erosion. Up to 7" of rain was reported to have fallen throughout New England. 'Bob' was blamed for 18 storm-related deaths. The damage total for Southern New England was set at $1 billion, with $2.5 billion overall damage from the storm. The name 'Bob' has been retired.

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MEMA ADVISES CAUTION DURING EXTREMELY HOT WEATHER

FRAMINGHAM, MA – With the extremely hot weather the Commonwealth is presently experiencing, the Massachusetts Emergency Management Agency (MEMA) is advising people to be cautious during this period of extreme heat, and is offering some tips to help keep cool and safe.

"A few common sense measures can reduce heat-related problems, especially for the elderly, the very young and people with respiratory ailments, who are more susceptible to the effects of high temperatures," said MEMA Director Don Boyce. "Many communities have set up cooling centers to assist those seeking relief from the oppressive heat."

Here are some tips to follow during hot, humid weather:

- Slow down, avoid strenuous activity. Do not try to do too much on a hot day.
- Wear lightweight, loose-fitting, light-colored clothing. Light colors will reflect heat and sunlight and help maintain normal body temperature. Protect your face with a wide-brimmed hat.
- Drink plenty of water regularly and often, even if you do not feel thirsty.
- Limit intake of alcoholic beverages. They can actually dehydrate your body.
- Eat well-balanced, light, regular meals. Avoid high protein foods that increase metabolic heat.
- Stay indoors as much as possible.
- If you do not have air conditioning, stay on your lowest floor, out of the sun. Electric fans do not cool the air, but they do help evaporate sweat, which cools your body.
- Go to a place where you can get relief from the heat, such as air conditioned schools, libraries, theaters and other community facilities that may offer refuge during the warmest times of the day.
- Cover windows that receive morning or afternoon sun with drapes, shades, awnings or louvers. Outdoor awnings or louvers can reduce the heat that enters a home by up to 80%.
- Avoid too much sunshine. Sunburn slows the skin's ability to cool itself. If you are outside, use sunscreen lotion with a high SPF (Sun Protection Factor) rating.

- Never leave children or pets alone in a closed vehicle.
- Check on family, friends and neighbors.

In normal weather, the body's internal thermostat produces perspiration that evaporates and cools the body. However, in extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain normal temperature. Following these recommendations can prevent heat cramps, heat exhaustion and heat stroke.

- Heat Cramps are muscular pains and spasms due to heavy exertion. They usually involve the abdominal muscles or legs and are caused by loss of water due to heavy sweating. Treatment includes getting the person to a cooler place to rest in a comfortable position. Give the person a half glass of cool water every fifteen minutes.

- Heat Exhaustion typically occurs when people over-exert themselves in a warm, humid place where body fluids are lost through heavy sweating. Blood flow to the skin increases, causing blood flow to vital organs to decrease, resulting in a form of mild shock. The skin will be cool and moist, appearing either pale or flushed. The victim may have headache and/or experience nausea. There may also be dizziness. It is important to treat the victim promptly, so the condition does not intensify into Heat Stroke. Get the person to a cooler place. Remove or loosen tight clothing and apply cool, wet cloths, such as towels or sheets. If the person is conscious, supply a half glass of cool water every fifteen minutes, making sure the person drinks slowly. Let the person rest in a comfortable position, and watch carefully for changes in his or her condition.

- Heat Stroke is the most serious heat emergency. It is life threatening. The victim's temperature control system, which produces sweating to cool the body, shuts down. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly. The victim will have hot, red skin, with changes of consciousness. Their pulse will be rapid, but weak and they will experience rapid, shallow breathing. Body temperature can rise to 105F. If the person was sweating from heavy work or exercise, skin may be wet; otherwise it will feel dry. A person suffering from Heat Stroke needs immediate assistance. Call 911 and move the person to a cooler place. Immerse in a cool bath or wrap in wet sheets. Watch for breathing problems. Keep the person lying down and continue to cool the body any way you can. If the victim refuses water, is vomiting, or there are changes in the level of consciousness, do not give anything to eat or drink.

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